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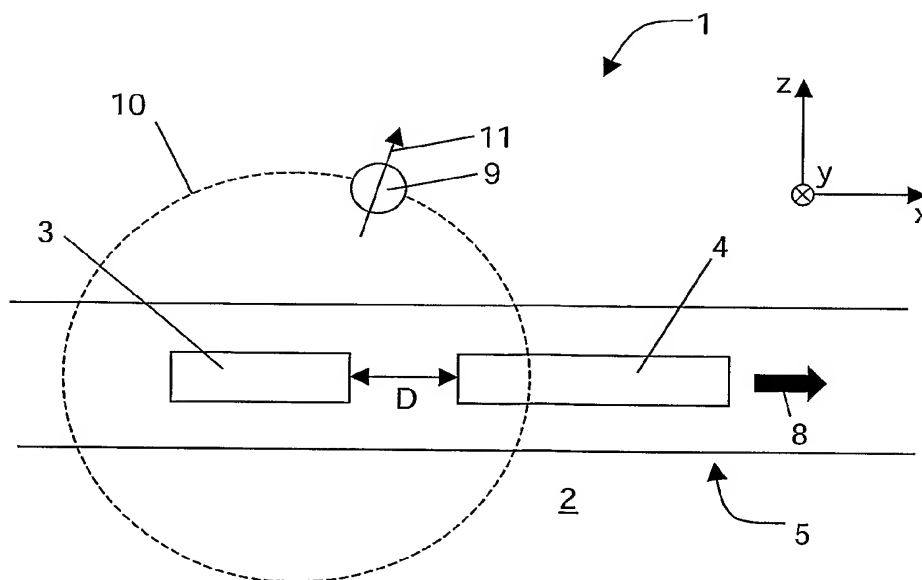
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[Continued on next page]

(54) Title: METHOD AND DEVICE FOR ON-CHIP MAGNETIC RESONANCE SPECTROSCOPY



(57) Abstract: A method and a device for on-chip magnetic resonance spectroscopy (FMR, SPR, EPR, ESR, NMR) is proposed. On-chip magnetic resonance spectroscopy may be applied to non-magnetic as well as magnetic materials and to solids, liquids and gases. The method of the present invention is suitable for miniaturised materials analysis such as for example microfluidics. The strength of the method lies in the combination of highly efficient spin excitation near on-chip current wires with very sensitive on-chip magnetic sensors. The method and device also allows to separately detect different types of magnetic particles or molecules.

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